Project to Program -

LOG OF MEETING DIRECTORATE FOR ENGINEERING SCIENCES

SUBJECT: Thermal Overcurrent Protection Technology by Kopelman Ideas, Inc.

DATE OF MEETING: October 7, 1997

PLACE OF MEETING: East West Towers, Room 612

LOG ENTRY SOURCE: Doug Lee, ESEE

COMMISSION ATTENDEES:
Sheela Kadambi, ESEE
William King, ESEE
Doug Lee, ESEE
Anna Luo, ESEE
Mai Ngo, ESEE
Andrew Trotta, ESEE

NON-COMMISSION ATTENDEES: Jim Levering, Kopelman Ideas, Inc. Glenn Kopelman, Kopelman Ideas, Inc. Bob Kopelman, Kopelman Ideas, Inc. Anthony Vigliotti, Lyntronics, Inc.

SUMMARY OF MEETING:

Mr. Bob Kopelman gave a brief overview of Kopelman Ideas, Inc. and how he developed the idea of his supplementary thermal overcurrent technology. He described the causes of electrical fires in appliances such as arcs and sparks, direct short circuits, resistance heating, circuit overloads, and glowing connections. These causes can create heat at the male plug that is undetected by the overcurrent protection provided by circuit breakers and fuses.

Their thermal overcurrent protection technology is designed as an adapter between an appliance power cord and a wall receptacle or as part of the plug in an appliance power cord or extension cord. It uses a thermal sensing device to sense the temperature of a receptacle connection and interrupts power to the load in the ungrounded connection before a fire can start. It can also be designed with an audible and/or visual indicator.

Mr. Kopelman gave examples of thermal overcurrent technology that has proven to be effective over time and required by the NEC. The examples included fractional horsepower motors, fluorescent light ballasts, and recessed lighting fixtures.

Mr. Kopelman discussed the 1999 National Electrical Code proposals that were submitted by Kopelman Ideas, Inc. requiring this technology for protection of flexible cords and fixture wires. Mr. King described the role of the U.S. CPSC and the processes involving the National Electrical Code and voluntary standards organizations. Additionally, Mr. King explained the staff's position on the proposals and suggested ways to help introduce this fire safety technology.

The device was demonstrated by using a low wattage soldering iron to heat a receptacle connection. The connection was interrupted and a buzzer sounded when the temperature of the thermal sensor exceeded approximately 200 degrees F.